

| PROJECT  |         |                |        |   | <b>TRIANGLE COMPUTATION (FOR CALCULATING MACHINE)</b><br><small>For use of this form, see FM 3-34.331; the proponent agency is TRADOC.</small> |                |      |                    |                 |                 |
|--|---------|----------------|--------|---|--|----------------|------|--------------------|-----------------|-----------------|
| LOCATION   |         |                |        | ORGANIZATION  |  |                |      |                    | DATE (YYYYMMDD) |                 |
| SYMBOL   | STATION | OBSERVED ANGLE | CORR'N | SPHER'L<br>ANGLE  | SPHER'L<br>EXCESS  | PLANE<br>ANGLE | SINE | DISTANCE           |                 | SIDE            |
|  | 1       |                |        |   |  |                |      |                    | 2-3             |                 |
|  | 2       |                |        |   |  |                |      |                    | 1-3             |                 |
|  | 3       |                |        |   |  |                |      |                    | 1-2             |                 |
|  |         |                |        |   |  |                |      | D=Ratio, side/sine |                 |                 |
|  |         |                |        |   |  |                |      |                    |                 |                 |
|  | 1       |                |        |   |  |                |      |                    | 2-3             |                 |
|  | 2       |                |        |   |  |                |      |                    | 1-3             |                 |
|  | 3       |                |        |   |  |                |      |                    | 1-2             |                 |
|  |         |                |        |   |  |                |      | D=Ratio, side/sine |                 |                 |
|  |         |                |        |   |  |                |      |                    |                 |                 |
|  | 1       |                |        |   |  |                |      |                    | 2-3             |                 |
|  | 2       |                |        |   |  |                |      |                    | 1-3             |                 |
|  | 3       |                |        |   |  |                |      |                    | 1-2             |                 |
|  |         |                |        |   |  |                |      | D=Ratio, side/sine |                 |                 |
|  |         |                |        |   |  |                |      |                    |                 |                 |
|  | 1       |                |        |   |  |                |      |                    | 2-3             |                 |
|  | 2       |                |        |   |  |                |      |                    | 1-3             |                 |
|  | 3       |                |        |   |  |                |      |                    | 1-2             |                 |
|  |         |                |        |   |  |                |      | D=Ratio, side/sine |                 |                 |
|  |         |                |        |   |  |                |      |                    |                 |                 |
| Case I $a/\sin A = b/\sin B = c/\sin C$<br>Given : 3 angles, 1 side      |         |                |        | Case III $\tan A = a \sin B / c - a \cos B$<br>Given : 2 sides and included angle |  |                |      | COMPUTED BY        |                 | DATE (YYYYMMDD) |
| Case II $\sin B = b \sin A / a$<br>Given : 2 sides and an angle opposite |         |                |        | Case IV $\cos A = [2s(s-a)/bc] - 1$ $s = 1/2(a+b+c)$<br>Given : 3 sides           |  |                |      | CHECKED BY         |                 | DATE (YYYYMMDD) |